What is claimed is:

1. An electronic digital stethoscope comprising a vibration transducer, an amplifier, a headphone arrangement, a pre-emphasis filter means for emphasizing high frequencies, and at least one digital filter means for establishing at least one impulse transfer function corresponding to at least one acoustic stethoscope type.

2. A stethoscope according to claim 1, wherein said pre-emphasis means is operative for increasing amplification from about 20 Hz to about 3,000 Hz.

3. A stethoscope according to claim 1, further comprising means for an A/B comparison between the linear sound before filtering and the sound after digital filtering.

4. A stethoscope according to claim 1, wherein multiple headphones are coupled to one and the same amplifier.

5. A stethoscope according to claim 1, wherein multiple impulse transfer functions corresponding to multiple stethoscope types are stored in conjunction with the digital filter.

6. A stethoscope according to claim 1, wherein the at least one impulse transfer function of the digital filter means is obtained by measurement on a specific stethoscope.

7. A stethoscope according to claim 2, further comprising digital pattern recognition means for windowing the acoustic signal to adaptively remove noise from the surroundings and suppress repetitive signals in the observed signal.

8. A stethoscope according to claim 7, wherein the pattern recognition means is adapted to remove or enhance parts of repetitive signals in the observed signal.

9. A stethoscope according to claim 1, further comprising means for automatic control of amplification.

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10. A stethoscope according to claim 1, wherein, in the signal path before the filtering, a means for pre-emphasis of the high frequencies in dependence of the thickness of tissue which is present between an actual sound source and the transducer.

11. A stethoscope according to claim 1, wherein the headphone arrangement comprises transducers which are fitted in immediate proximity to the ear canal in each ear.

12. A stethoscope according to claim 11, wherein the signal to each ear is compensated with respect to the sensitivity of the particular earpiece.

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13. A stethoscope according to claim 1, further comprising signal processing means for producing a sound distribution to the headphone in which different sound signals are sent to each of left and right ears of a user.

14. A stethoscope according to claim 13, wherein said at least one filter means comprise plural filters which produce a spatial sound distribution based on frequency, a low frequency band being delivered to a first earpiece of the headphone and a high frequency band being delivered to a second earpiece of the headphone.

15. A stethoscope according to claim 13, wherein said signal processing means produces a temporal sound distribution, sound signals being first being delivered to a first earpiece of the headphone and then being delivered to a second earpiece of the headphone.

16. A stethoscope according to claim 13, wherein said signal processing means produces a temporal sound distribution, sound signals being alternately delivered to a first earpiece of the headphone and to a second earpiece of the headphone.

17. A stethoscope according to claim 13, wherein said at least one filter means comprise at least one Wiener filter.

18. A stethoscope according to claim 13, wherein balance control means is provided adjusting the relative volume of sound delivered to each ear of a user.

19. A stethoscope according to claim 18, wherein frequency-dependent amplification control means is provided for adjusting the volume of sound delivered to one ear of a user relative to that delivered to the other ear of the user.

20. A stethoscope according to claim 13, wherein amplification control means is provided adjusting the volume of sound delivered to one ear of a user relative to that delivered to the other ear of the user.

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